APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER
AKHAVANNIK, HADI

ART UNIT	PAPER NUMBER
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/716,671	CHEN ET AL.
	Examiner	Art Unit	
	Hadi Akhavannik	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,9-15 and 19-24* is/are rejected.

7)☒ Claim(s) *7,8 and 16-18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>20 November 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/10/04 3/3/04 9/18/06</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20070530

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

> When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 21-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 21-24 defines a storage medium embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory

in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed a medium can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 9 claims that "K equals to one and alpha equals to one". Claim 7, which claim 9 depends on, defines K as being greater than 1 and alpha not being equal to one. Therefore, the limitations of claim 9 are indefinite because the contradict the limitation of claim 7.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-6, 10-15, 19-24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Luo (6697502). in view of Rhoads (5636292).

Regarding claim 1, Luo discloses a method of processing an image,

characterized by comprising steps of: identifying one candidate for human face region

within said image (please see column 5 line 50 to column 8 line 21 for a general

description. See column 6 lines 53-65 and column 7 line 27 to column 8 line 21

specifically. These sections disclose a human face region locating method);

calculating a probability that said candidate for human face region represents a

human face (column 7 lines 5-26 and figures 7a-7f as it discloses finding the probability

that a region is a skin region of a face. Figures 7a-7f disclose that this method is

applied to a face region. Also column 7 line 27 to column 8 line 21 discloses using the

skin region identification method to determine if the region is a face. This method uses

a probability to determine the likelihood that the region is a face.);

Luo does not explicitly disclose saving the probability to the image.

Rhoads discloses attaching information and codes as a header to an image (see

column 42 lines 25-60 as it discloses attaching information to an image by using a

header).

It would have been obvious at the time of the invention to one of ordinary skill in the art to include in Luo a header attachment means as taught by Rhoads. The reason for the combination is because it makes for a more robust system that is able more give information to the system about the information contained in an image without having the system analyze the image. Further both inventions are from the same field of endeavor of image processing.

Regarding claim 2, Rhoads discloses saving information to the header as additional information in column 42, lines 25-36. Luo discloses calculating indentification information such as the skin probability in column 7 lines 5-26. Therefore, all limitation of claim 7 are met.

Regarding claim 3, Rhoads discloses that the attached information and said additional attached information are saved in a predetermined format to the header file or the footer file of said image (figures 16 and 17 of the Rhoads disclose the image format is predetermined).

Regarding claim 4, please see the rejection of claims 1 and 2 and further see Luo, column 7 lines 25-26 as it disclose using a threshold.

Regarding claim 5, the rejection of claim 2 discloses all aspects of claim 2.

Regarding claim 6, the rejection of claim 3 discloses all aspects of claim 6.

Regarding claim 10-11, please see the rejection of claim 4 and note that figure 4 of Rhoads discloses an apparatus.

Regarding claim 12, please see the rejection of claim 1 as it discloses all aspects of claim 12. Please note that the examiner is interpreting "portrait probability" to be the

probability that the region contains a face. The rejection of claim 1 discloses how Luo

discloses using the skin region probability and the face region probability to determine if

the region contains a face.

Regarding claim 13, the rejection of claim 3 discloses all aspects of claim 13.

Regarding claims 14-15, please see the rejection of claims 4 and 3 respectively

as they disclose all aspects of claims 14-15.

Regarding claim 19-20, the rejection of claims 12 and 14 disclose all aspects of

claims 19 and 20. Also see the rejection of claim 10 as it discloses an apparatus.

Regarding claim 21, please see the rejection of claim 1 as it discloses all aspects

of claim 21.

Regarding claim 22, please see the rejection of claim 4 as it discloses all aspects

of claim 22.

Regarding claim 23, please see the rejection of claim 12 as it discloses all

aspects of claim 23.

Regarding claim 24, please see the rejection of claim 14 as it discloses all

aspects of claim 24.

Allowable Subject Matter

Claims 7-8 and 16-18 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims. A similar argument would be

made with regards to claim 9 once the 112 rejection is overcome.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ray et al. (6940545) discloses a method of detecting a face from an image by using skin probability and taking facial characteristics into account.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hadi Akhavannik whose telephone number is 571-272-8622. The examiner can normally be reached on 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571)272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HA
5/30/07

JOSEPH MANCUSO
SUPERVISORY PATENT EXAMINER